

Specification Amendments

Please amend the title of the invention on page 1 as follows:

METHODS FOR DETECTING A TARGET MOLECULE BY MONITORING  
ELECTROCHEMICAL ACTIVITY AT ELECTRODE SURFACES

Please amend the paragraph on page 23, lines 23-31, as follows:

Arrayed Hybridization Detection and Continuous Monitoring: In one embodiment, each array probe 58 possesses a detector agent. A suitable detector agent is either a compound that exhibits redox activity or a chemical moiety that is one member of a bioconjugate pair. The redox complexes may have one or more functions that can be reduced or oxidized. Typically, the redox complexes contain one or more centers, namely, a center having a chemical function that accepts and transfers electrons. Some redox complexes include the transition metal oxides and mixed oxides, e.g. the oxides of W, Ni, Rh, Ir, Nb, Mo, V; the complexes of transition metals, Cd, Mg, Cu, Co, Pd, Zn, Fe, Ru, as disclosed in US Patent No. 5,591,578.

Please amend the paragraph on page 15, lines 9-24, as follows:

The control electronics to the microelectrodes 18 can be attained in many conventional ways. For example, an adaptation of the system described in U.S. Patent No. 5,849,486 may be used, the relevant portions of which are incorporated herein by reference. The system described in U.S. patent application Serial No. 09/100,152, filed on June 18, 1998, now U.S. Patent No. 6,251,595, incorporated by reference hereunto in its entirety, is preferred. In this regard, referring to Fig 1, the electrodes 18 of the array are at predetermined locations or sites on the integrated circuit chip 12 and generally are of the micro scale. The usual function of the electrode 18 is to apply a DC signal. By functioning to apply a DC signal is meant that an electrode is biased either positively or negatively, operating in a direct current mode. It should be noted that other types of signal application may be used. For example, the signal may be an AC signal. The AC signal may be applied at selected sites by generation of AC signal at the selected sites. On the other hand, one or more tree-like signal buses that are accessible to each and every site may be used. To each bus may be applied either or both an AC or a DC signal. Each addressed site may, as desired, connect any signal bus to its electrode in response to appropriate settings of its storage element.